

## **S.0 EXECUTIVE SUMMARY**

### **S.1 Proposed Action**

The Wisconsin Department Transportation (WisDOT) and the National Railroad Passenger Corporation (Amtrak), in cooperation with the Federal Railroad Administration (FRA), and with input from Canadian Pacific Railway (CP Railway) and Wisconsin & Southern Railroad (WSOR), propose the return of passenger rail service between Milwaukee and Madison, Wisconsin. Through agreements that would be developed with CP Railway, the 85-mile (136-kilometer) route would primarily use CP Railway right-of-way from Milwaukee to Madison. Passenger trains would operate on rail corridors that are primarily used for freight trains. Passenger train speeds would range from 20 mph (32 kph) up to a top speed of 110 mph (180 kph) on certain segments of the route. This proposal would relay existing track and repair, replace, or leave in existing bridges, culverts, and pipes as needed to meet minimum design standards for the operation of passenger rail.

Potential station locations for passenger services were evaluated and locations recommended. Stations are proposed in Milwaukee, Madison, Brookfield, Oconomowoc, and Watertown. In Milwaukee, the existing Amtrak facility, which is planned for renovation, would be recommended. Historic train stations, such as in Brookfield and Oconomowoc, would enjoy a return to their original use. New stations would be needed in Madison and Watertown. Three station location alternatives have been identified in Madison; one location has been identified in Watertown.

Passenger rail service is scheduled to begin in late 2003, with six daily round-trip trains between Milwaukee and Madison. Service is proposed to increase to ten daily round-trips after 2005, when service to St. Paul would be initiated.

Fares between Madison and Milwaukee are currently estimated to be between \$20 and \$33 each way. Although fares have not yet been set, it is anticipated they would be lower for travel between the intermediate stations and either Madison or Milwaukee. It is anticipated that the fare from Milwaukee to Chicago would remain around the current \$20 each way. The total trip time between Milwaukee and Madison is estimated at one hour and seven minutes.

### **S.2 Purpose and Need for Action**

The purpose of this proposed action is:

- to return direct, convenient and attractive passenger rail service between Milwaukee and Madison by reconstructing or rehabilitating the existing rail infrastructure, within existing right-of-way;
- to offer a travel alternative that is competitive with the travel time and costs of auto, intercity bus and regional air modes;

- to offer a travel alternative that avoids or minimizes new impacts to the environment; and,
- to evaluate and propose potential passenger train station locations for consideration by host communities.

The need for the proposed action is based on vulnerabilities of available travel modes in the project corridor. Existing transportation modes including highway and air travel have their inherent problems including congestion and sensitivity to inclement weather conditions. Passenger rail service can provide an additional passenger travel alternative to congested highways and weather-sensitive airports.

### ***Background***

The existing transportation network in the Milwaukee-Madison corridor consists of highway (auto and bus), air, and passenger rail modes. Amtrak operates a single route between Chicago and Minneapolis/St. Paul (the long distance *Empire Builder* with continuing service to Seattle). The existing Amtrak service stops at Columbus, Wisconsin and does not directly serve the City of Madison.

The provision of passenger rail service has been recommended in planning studies conducted by regional, state, and local groups and agencies. Madison's numerous government, business and university destinations make it one of the most rapidly growing cities in the state, and a logical rail destination in the region. The proposed Milwaukee-Madison passenger rail service would also provide connectivity to the existing Milwaukee-Chicago rail service.

The Milwaukee-Madison passenger rail link is part of the proposed larger Chicago-Minneapolis/St. Paul high-speed rail corridor, which is a component of the proposed Midwest Regional Rail System (MWRRS). MWRRS is a nine-state/Amtrak initiative proposing to use 3,000 miles (5,000 kilometers (km)) of existing rail rights-of-way to connect rural, small urban and major metropolitan areas, using modern passenger rail trains and improved tracks and signaling. The WisDOT multimodal transportation plan ([Translinks 21](#)) and the State Rail Plan support passenger rail as a way to integrate affordable alternative modes into their transportation network.

## **S.3 Alternatives**

### **S.3.1 No-Build**

The "No-Build" alternative includes maintaining the existing rail corridor for continued freight service. This alternative would not provide an alternative mode of passenger transportation between Milwaukee and Madison, and would not meet the transportation planning goals as set forth by the State of Wisconsin and by the Midwest states involved in developing the MWRRS. If freight service were expected to continue for current customers along the line, maintenance to the rail corridor would be required.

Environmental impacts to provide safe, efficient freight rail service would be similar, if not equal, to those of the proposed project.

### **S.3.2 Build**

The proposed passenger rail project would provide an alternative travel mode through improvements to the existing rail corridor. These improvements would replace ties, track, ballast, and structures along the corridor, as needed, to the level of quality necessary to operate today's advanced passenger trains. The proposed project would use only existing rail rights-of-way, thereby avoiding or minimizing adverse environmental impacts.

Local communities would be expected to design, evaluate, and construct their own stations. Oconomowoc and Brookfield propose to make use of their former passenger stations. A potential new station in Watertown would be located near Third Street, south of Clyman Street.

Three alternative station sites are proposed in Madison. These three sites are the Dane County Regional Airport, Pennsylvania Avenue near the current WSOR yards, and the One West Wilson Street State Office Building next to Monona Terrace. One or two preferred Madison station sites will be determined as a result of the many public meetings already held, and the Public Hearings to be held for the project. Passenger rail service would be provided at the existing Amtrak station in Milwaukee.

The re-introduction of passenger rail service between Milwaukee and Madison would require specific safety upgrades to the existing right-of-way, crossings, and signals. A new centralized train control system would be implemented for constant train traffic management and collision avoidance at crossings. Under FRA regulations, an advanced train control system such as Positive Train Control is required to permit train operations in excess of 79 mph.

The total conceptual level infrastructure cost for upgrading the Milwaukee-Madison rail corridor is estimated to be approximately \$176 million (year 2000 dollars). This estimate, based on 30 percent engineering, includes track and civil construction, grade crossing improvements, signals, structures, and contingencies. This funding would not be available for other public works projects once applied to this project. Capital costs for train sets, a layover facility, new stations, advanced train control equipment on freight locomotives, and ancillary facilities are not included in this cost estimate. Former Governor Thompson's Blue Ribbon Task Force on Passenger Rail recommended seeking funding for 80 percent of the capital costs from the federal government and the remaining 20 percent from state sources. While there is a federal program to assist with grade crossing improvements in designated high-speed corridors and there is no current federal funding program for the remainder of the proposed action. However, a \$12 billion High-Speed Rail Investment Act (HSRIA) is under consideration by the U.S. Congress. This act would fund high-speed rail projects, such as proposed for this corridor.

### **S.3.3 Alternative Corridors Considered and Dismissed**

#### **Statewide Corridor Study**

The WisDOT's Tri-State High Speed Rail Study for the Chicago – Milwaukee – Twin Cities Corridor addressed several route alternatives in two different corridors identified as the “Southern Corridor” and the “Northern Corridor”. The study concluded that the Southern Corridor was preferred to the Northern Corridor in environmental, economic and financial terms. The November 1994 Translinks 21 Plan recommended the Milwaukee – Madison – Twin Cities route for high-speed rail because it provides connectivity to Madison. The Midwest Regional Rail Initiative identified this preferred route in their analyses. The Northern Corridor would not meet the purpose of providing passenger rail service to the City of Madison.

#### **Bypasses in the Project Corridor**

There were requests from local communities to examine rail bypasses as a means to minimize proximity impacts of passenger trains on existing tracks. Bypasses of communities were rejected as not being reasonable or feasible alternatives due to the added costs and negative environmental impacts of constructing new rail right-of-way. New bypasses would not meet the purpose of minimizing costs and environmental impacts associated with rail infrastructure already in use.

#### **Alternative Speeds/Technology Considered and Dismissed**

The Midwest Regional Rail Initiative study evaluated three speed/technology scenarios – Moderate, Conservative, and Aggressive – to refine its business plan<sup>1</sup>. These scenarios compared the investment in the technology with the potential revenue from passengers. The Moderate Scenario showed the greatest revenue per dollar invested and generated the lowest operating costs over existing passenger rail services. Thus, the 110 mph service, using new technology, was selected as the preferred scenario for the purposes of this study.

### **S.4 Probable Impacts**

The proposed project would improve the 85-mile (136-kilometer) rail route within existing railroad rights-of-way. Table S-1 summarizes impacts to the natural and social environment that would result from the build alternatives. This Environmental Assessment considers impacts in the Milwaukee-Madison project corridor if passenger rail service is fully implemented between Chicago and Minneapolis/St. Paul as part of the Midwest Regional Rail System. Full passenger rail service is expected to be 10 daily round trips by the year 2010.

---

<sup>1</sup> Conservative Scenario = 79-90 mph (126-144 kph); Moderate Scenario = 110 mph (176 kph); Aggressive Scenario = 125 mph (200 kph)

#### **S.4.1 Land Use and Related Socio-Economic Characteristics**

Because the rail corridor is already in place and in use, it is unlikely that land uses adjacent to the rail would change as a result of reintroducing passenger rail service into the corridor. In contrast, the passenger stations may induce some land use changes as they may trigger the development of businesses in their vicinity to serve passengers.

Minimal neighborhood disruption is anticipated along the passenger rail corridor since the railroad predates housing development. The railroad already acts as a boundary for many neighborhoods along the corridor. Proposed safety fencing of the right-of-way in communities may give the perception of severing neighborhoods. Also, many local residents may view the increased train frequency west of Watertown as a negative impact on the quality of life due to noise and safety concerns. WisDOT would continue to coordinate with individual communities to address specific local concerns in the project corridor.

#### **Safety**

Track, train control, signals, and railroad crossing upgrades are proposed to ensure the safety of the public as well as train operators. Right-of-way fencing would be replaced, repaired, and/or installed to provide safety for train operators and the adjacent property owners.

WisDOT continues to work with local communities to close crossings that are illegal or redundant. This minimizes the risk of train/vehicle exposure. Education and enforcement programs that increase public awareness of grade crossing safety is an integral part of a complete public safety program. WisDOT is involved with Wisconsin Operation Lifesaver, Inc. (OLI) through which WisDOT and private railroad staff provide grade-crossing safety education to communities.

#### **Property Values**

Local property owners have raised concerns that noise, safety and increased train traffic may potentially lower property values of residences adjacent to the proposed corridor. The FRA recently completed a related study that included a review of the effect of proximity to rail corridors on property values. The study concluded that after taking housing and neighborhood characteristics into consideration, proximity to rail lines has a negative influence on housing values within 1,000 feet of a rail line. Thus, existing property values along the corridor would likely already reflect proximity effects. However, a conclusion for the potential impact on property values in this project corridor study cannot be readily made since the FRA study does not distinguish between rail lines with relatively low activity and those with high or changing levels of activity.

#### **Relocations**

One active business would be relocated if the Pennsylvania Avenue station site in Madison were selected. A second property at the proposed station site is used for construction equipment storage. The equipment would also require relocation. A review

of current real estate listings shows that adequate replacement sites are available within the city.

### **Economic Conditions**

New construction, maintenance and operations jobs, and the purchase of local materials would be a direct economic benefit of implementing passenger rail service between Milwaukee and Madison. Indirect impacts may be realized locally as construction and maintenance crews spend money at local businesses along the corridor. Indirect economic benefits would accrue to local communities with passenger train stations as station personnel would likely live and spend wages locally. Also, new stations in served communities may induce secondary economic development from nearby station-oriented development.

### **Environmental Justice**

Disproportionately high and adverse human health or environmental effects on minority and low-income populations are not anticipated on this project since the rail corridor moves through a number of different neighborhoods that vary widely in income levels and racial composition. No particular neighborhood would be affected by the physical environmental impacts differently than another. Therefore, any adverse effects of this project would not be predominately borne by a minority and/or a low-income population.

A review of census tracts along the project corridor shows that low-income and minority populations are located near the Menomonee Valley in Milwaukee County. However, these neighborhoods are not adjacent to the project route, which travels through industrial areas. Furthermore, no concerns were raised during discussions with local officials in the City of Milwaukee and Milwaukee County.

However, the project route does pass through low-income census tracts in Madison. WisDOT has met several times with local neighborhoods and elected officials to address specific concerns along the project corridor. As a result, the City of Madison has formally requested WisDOT to continue to work with local neighborhoods to develop a corridor management plan to address specific concerns as the design phase proceeds.

### **Cumulative/Secondary Impacts**

The secondary and cumulative impact from potentially induced station site development could lead to increased impacts to water and other natural resources. However, all station sites are located in urban areas previously developed and additional impacts are expected to be minimal. New passenger stations in an urban area could lead to urban redevelopment rather than new development on the urban periphery. Secondary impacts of traffic from stations and diverted traffic from grade crossing closures are expected to be minimal since traffic volumes on surrounding streets are low and can absorb added traffic without degradation of operations. Passenger rail service also diverts the greatest number of riders from autos, which helps reduce individual vehicle trips.

Improved track infrastructure between Watertown and Madison may induce increased freight traffic. However, increased freight rail traffic would ultimately depend on outside market influences.

## **S.4.2 Transportation**

### **Forecast Ridership**

Total annual rail ridership is forecast to be approximately 872,000 riders in 2010, which includes those with origins and destinations between Milwaukee and Madison (or vice versa), as well as riders on the train from outside the project corridor. That is, through traffic passengers, such as those taking a train from Minneapolis/St. Paul to Chicago, are included in the forecast. Non-business travel accounts for most of the projected rail ridership. Business travel is forecast to be 223,000 or about one-fourth of these trips. The forecasts are based on an annual forecasting model. Therefore, additional analysis would be required to model the seasonal and daily ridership as well as peaking characteristics. This has been addressed in Section 3.2.6 of the EA.

Approximately 67 percent of the total rail ridership in 2010 is diverted from autos, 8 percent from airplanes, and 19 percent from buses. The air diverted passenger traffic cited is expected since the Madison-Milwaukee rail link would serve as a connector to the major airport hubs enhancing competition by air carriers. Diversion of local air trips with an origin and destination between Madison and Milwaukee would be negligible.

### **Operating Revenues and Costs**

The revenues generated by the proposed passenger rail service are projected to cover the operating costs of the service within two years following the start of operations. This would be made possible by attractive travel times, increased frequencies and efficient use of equipment and crews.

### **Freight Operations**

In coordination with CP Railway and WSOR, improvements would be made to avoid the impact of passenger rail service on freight operations. Impacts to freight operations could be increased time spent on sidings and schedule delays. Examples of mitigation would include proposed sidings in Watertown, Sun Prairie and Madison, and a second track that would be re-installed between the Union Pacific Railroad (UPRR)/CP Railway crossing in Watertown and Pewaukee. Double tracks are already in place between Pewaukee and Milwaukee. The addition of passenger service would not affect the operating hours of the existing freight rail service. Additional mitigation may require improvement of the freight route through Milwaukee. In all cases, additional sidings and facilities would be constructed within existing rights-of-way.

### **Local Vehicular Traffic Impact at Stations**

Impacts of additional vehicle traffic going to and from rail stations on local streets is expected to be minimal as most increases are less than 10 percent of existing traffic volumes on local streets.

## **Grade Crossing Improvements**

Improved grade crossing warning systems would include the installation of extended single-arm gates or four quadrant gates to prevent vehicles from driving around crossing barriers. Median barriers may also be proposed to prevent “drive-around” movements at gates. High traffic volume crossings may be equipped with vehicle arresting systems if further studies determine that this technology is warranted. Vehicle arresting systems are structures that physically deter vehicles from entering the grade crossing when a train is approaching the crossing.

Of the 164 road/rail at-grade crossings along this corridor, 122 are public grade crossings and 42 are private grade crossings. Of the 122 public grade crossings, nine are recommended for closure. Grade crossing closure recommendations were coordinated with each community and are based on preliminary local concurrence with the proposed closures. All of the nine proposed public at-grade crossing closures are low volume roadway facilities with nearby alternate routes. There would be no adverse impact to adjacent roadways that would receive diverted traffic.

Of the 42 private farm and non-farm grade crossings, 22 are recommended for closure. Of these 22 proposed closings, 20 are farm crossings and 2 are non-farm crossings. In each case, alternative access was identified either via public roads or by re-routing several private crossings to one private crossing. Warning devices at the remaining open crossings may include single gates, flashing light signals, and ITS (Intelligent Transportation Systems) elements such as a “trapped” vehicle detection system and an advanced warning system. Private crossings would not be closed if no alternate access is available to a property.

Crossing treatments would either be upgraded or remain the same for those public grade crossings that include existing bicycle or pedestrian facilities. For the pedestrian or bike path crossings where train speeds exceed 79 mph, the crossing warning devices would include back gates, which are gates that drop across pedestrian and bike paths at grade crossings, to deter travel along the sidewalk or bicycle path into the crossing area.

Input from the operating railroads and the Federal Railroad Administration would also be considered for the treatment of public and private crossings. The Wisconsin Office of the Commissioner of Railroads would make the final determination regarding public grade crossing closures along the corridor.

### **S.4.3 Farmlands**

Since the proposed improvements would be confined to the existing right-of-way, no direct impacts to farmland are expected. Twenty farm crossings are proposed for closure. However, any proposed crossing closures that cause negative economic impacts to farm operations (such as land locking or loss of access) would not be closed without further negotiation with the landowners.



#### **S.4.4 Parks and Unique Areas**

The improvements to the passenger rail corridor would be confined to existing railroad right-of-way, which would avoid impacts to parklands. The proposed project would not affect current access for the Ice Age Trail in the Village of Hartland. The existing public crossing at Maple Avenue that is currently used to link the Ice Age Trail with a local village trail would be maintained and upgraded with additional crossing warning devices. The National Park Service would coordinate with CP Railway to explore the possibility of creating a grade separated crossing in the future.

#### **S.4.5 Air Quality**

The results of the air quality analyses indicate that emissions along the I-94 corridor, between Milwaukee and Madison, would decrease for HC, CO, and NO<sub>x</sub>, as a result of reduced auto travel associated with the proposed project, compared to the No Build Alternative. This positive effect on HC, CO, and NO<sub>x</sub> ambient concentrations in the southern Wisconsin urban air shed would help to decrease the precursor emissions for ozone.

While some emissions would decrease because of reduced auto travel, the proposed project is expected to result in a 3 pound per day (1 kilogram) increase in particulate emissions due to the introduction of passenger rail service. The increase in particulate emissions would not hinder the area's ability to stay in attainment for particulate levels established in the National Ambient Air Quality Standards.

#### **S.4.6 Noise and Vibration**

Noise impacts associated with the re-introduction of passenger rail service were reviewed. The findings indicate that no additional impacts are expected in the project corridor between Milwaukee and Watertown. However, impacts are expected west of Watertown where current rail activity is light compared to rail activity east of Watertown. Impacts west of Watertown would require mitigation measures.

Tools to reduce noise impacts include train equipment specifications, train wheel maintenance, continuous welded rail, and noise barriers. The selection of noise abatement measures would follow federal, state, and local guidelines for noise abatement as soon as the preferred alternative is determined. Final design would require additional noise impact analysis and neighborhood involvement for areas identified to have impacts.

Ground-borne vibration occurs along most of the project corridor under both existing and future conditions. Improved rail technology proposed for the track upgrades, plus the use of lighter weight passenger trains would actually reduce ground-borne vibration levels between Milwaukee and Watertown. However, due to increased activity west of Watertown, ground-borne vibration can be expected to increase. Proposed track improvements, which include resilient tie pads and resilient fasteners would avoid or

minimize vibration impacts. No ground-borne noise impacts are expected in the project corridor.

### **Whistle Blowing and Quiet Zones**

The FRA has a proposed rule requiring train horns be sounded at every public highway/rail crossing. FRA has proposed an exception for crossings within designated “Quiet Zones.” If all crossings within a Quiet Zone were equipped with approved safety measures in addition to the conventional gates and flashing lights, locomotive horns would not need to be sounded. Since the rule is currently in the draft stage, this project would include sufficient grade crossing warning devices to establish Quiet Zones in anticipation of the final rule. Under new rules proposed by FRA, enhanced grade crossing warning systems may be employed to create a Quiet Zone for a limited area. WisDOT intends to meet the requirements of the proposed rule by improving grade crossing warning systems that would provide an opportunity for communities to apply to the FRA for a Quiet Zone along the rail corridor if the FRA rule were promulgated.

### **S.4.7 Streams**

Potential water quality impacts during construction would be minimized by using management practices such as silt fencing and promptly stabilizing/seeding exposed soils. Long-term maintenance activities can result in the temporary and localized discharge of pollutants. Some direct contact to streams from chemicals used for vegetation control may occur due to wind drift. However, the majority of sprayed and/or applied chemicals would be filtered out or adsorbed as surface runoff flows through vegetated swales and wetlands within the right-of-way. WisDOT would coordinate with WDNR during final plan development to review bridge abutment and pier placements, as well as determine the timing of construction activities in streams to avoid impacts to aquatic species.

### **S.4.8 Floodplains**

The project crosses many floodplain areas as designated by the Federal Emergency Management Agency (FEMA). Proposed drainage structures would be designed so that backwater elevations would be no more than 0.01 foot (less than 1 centimeter) higher than that experienced with the existing structure in place. Replacement structures would typically have fewer piers, which would improve water flow and eliminate debris retention. No impacts are anticipated.

### **S.4.9 Wetlands**

Track replacement, related embankment repairs, and new freight siding construction between Watertown and Madison would affect approximately 13.5 acres (5.4 hectares) of wetlands within the right-of-way of this 39-mile segment of the alignment. New abutments would be placed behind existing abutments in those areas where wetlands would be affected. Proposed land bridges in wetland areas between Hubbleton and Sun Prairie may act to restore some hydrologic connections historically severed by the

railroad. The land bridges are long structures in areas where upper soil layers cannot adequately bear the weight of railroad tracks and equipment. Land bridges would carry the railroad tracks and transfer loads down to stable soils or bedrock.

WisDOT, the WDNR, and the USACE have agreed that mitigation at a wetland bank operated by WisDOT would be appropriate compensation for wetland impacts.

#### **S.4.10 Wildlife**

The primary impact to terrestrial vegetation and wildlife would include short-term and long-term losses of forbland vegetation through the clearing, excavating, filling, and re-grading of the railroad base in specific locations. Minimizing the zones of construction and revegetating / mulching where appropriate would reduce impacts from vegetation clearing.

Overall impacts to existing wildlife are anticipated to be minimal because proposed improvements to the railroad corridor would be relatively isolated and small in size, and because best management practices would be used to minimize unforeseen environmental damage. Operational impacts such as the noise and vibration emanating from passing trains are already a part of the existing condition along the project right-of-way. Wildlife that exists along the alignment has presumably become accustomed to this intrusion, as the entire route is used for freight rail traffic. During final design, the WDNR would be consulted to identify timing of specific construction activities.

The woven wire fence proposed to be installed along the rail right-of-way in rural areas would allow small animals to pass through. Larger animals with strong jumping abilities such as white-tailed deer and those with climbing abilities such as the raccoon could pass over the top. However, medium-sized species such as fox and coyotes would have difficulty passing the fence barrier at will. It is reasonable to predict that these species would eventually create tunnels under the fence at preferred crossing locations but they may experience difficulty escaping to protective cover as needed. Bridge crossings and the proposed land bridges noted in Section S.4.9 could act as wildlife crossings for terrestrial species.

#### **S.4.11 Threatened and Endangered Species**

A field survey identified one protected plant species occurring in the project corridor. However, habitat supporting other protected species does occur along or in the corridor. Impacts to rare plants and animals are similar to the wildlife impacts described above. In terrestrial areas, care would be taken to limit the area of disturbance and to avoid areas with known occurrences of rare species.

Rare species associated with aquatic resources such as streams and lakes may be negatively impacted by construction activities at water-crossing structures. Some of these water bodies are known to contain state-listed species of fish and plants. Continued coordination with resource agencies would help direct the appropriate timing and

construction techniques to protect sensitive species and minimize impacts in the specific areas of disturbance.

#### **S.4.12 Historic Resources**

The former Oconomowoc railroad depot is listed on the National Register of Historic Places (NRHP) and the former Brookfield depot is eligible for listing on the Register. The new station for Oconomowoc is proposed as an addition to the existing depot and the Brookfield depot would be re-used as the new station, but relocated a few hundred feet east of its existing site.

The proposed alignment to a downtown station site in Madison affects two historic properties. The One West Wilson Street State Office Building, the proposed downtown station site, is listed on the NRHP. If a station is located in the One West Wilson Street State Office Building, it would not significantly change the exterior of the building. The railroad bridges over the Yahara River are considered contributing elements to the Yahara River Parkway, which is on the NRHP. The bridges over the Yahara River would remain in place and not be affected.

If federal or state funds are used for station construction, local municipalities would be responsible for further consultation with the State Historical Society (SHS) to comply with requirements of Section 106 of the Historic Preservation Act and Wisconsin Statutes 44.40. Adverse effects could be avoided if a proposed station design or reuse does not affect the historic character or setting of the properties.

#### **S.4.13 Archeological Resources**

The field reconnaissance re-identified the location of two historic Euro-American Ice Houses. These are the Helms Brothers Icehouse and the Armour Ice East House. Neither structure is standing and both are located outside the existing right-of-way. The project would not affect the sites.

The archeological studies also included an intensive field survey at station locations in Madison, Watertown, Oconomowoc, and Brookfield. Previous construction and modern land use have completely obliterated the original soils resulting in a highly disturbed context.

#### **S.4.14 Hazardous Materials**

Since construction of the proposed track upgrades would occur within the existing right-of-way, no properties presenting environmental risk would be acquired. However, the possible station site alternatives in Watertown, Brookfield and Madison have the most potential for encountering hazardous materials, requiring additional investigations and/or remediation by local communities.

#### **S.4.15 Visual Quality**

Safety and crossing upgrades are not expected to substantially change the views of, or from, the existing rail corridor. The proposed fencing of the corridor may create the perception of further severance in communities. WisDOT would coordinate with local municipalities to determine appropriate measures for corridor maintenance and to mitigate the potential negative effect of fencing. Decorative fencing may be installed in select areas. Furthermore, federal funds, including those allocated under TEA-21, may be available to communities for aesthetic improvements. The railroads (CP Railway and WSOR), through operating agreements negotiated with WisDOT, would likely be responsible for maintenance of their right-of-way, including maintenance related to fencing, trash, and snow removal.

#### **S.4.16 Energy**

The energy consumption of different travel modes between Milwaukee and Madison were estimated in the EA. Auto fuel consumption would continue to be the highest of all travel modes. The diversion of auto trips to the rail passenger mode would result in decreases in future auto fuel consumption compared to the No Build Alternative. Under current assumptions, the per passenger energy consumption of trains is less than auto and air modes of travel, but higher than the bus mode.

#### **S.4.17 Construction Impacts**

Upgrades to crossings to install new warning systems could temporarily slow automobile and truck traffic flow. Railroad track re-construction would take place within the existing right-of-way to avoid impacts to adjacent properties. CP Railway would coordinate its own construction staging and operations between Milwaukee and Watertown based on prior experience with other segments of its rail network. Accordingly, any impact to freight service would be minimized. WSOR and CP Railway have indicated that it would use detour routes during construction between Watertown and Madison and does not anticipate substantial impacts to operations. Construction noise would be controlled in accordance with local ordinances.

#### **S.4.18 Permits Required**

The passenger rail project is being coordinated under the WisDOT/WDNR Cooperative Agreement. This agreement satisfies the requirement for WDNR permits. Construction over streams and wetlands will require a USACE Individual Section 404 permit. The 404 permit is valid once the WDNR grants Section 401 Water Quality Certification for the project.

### **S.5 Other Projects**

Other projects along the passenger rail corridor can potentially affect ongoing preliminary engineering which, conversely, could affect plans of other projects. The

following are projects identified in the study area that may require additional coordination as final design proceeds.

The City of Madison is currently conducting a transportation Alternatives Analysis that includes a local rail option on the Wisconsin and Southern Railroad (WSOR)-operated portion of the project corridor between Sun Prairie and Madison. WisDOT is coordinating with the City as alternatives are being developed for both studies.

The City of Madison's East Rail Corridor Advisory Committee is in the process of developing a land use plan for an area that includes a segment of the existing UPRR alignment between Baldwin Street and Livingston Street. The Committee's project area is bounded by East Washington Avenue, South Blair Street, Williamson Street, and the Yahara River. Land uses under consideration could include residential development and a community park. A conceptual plan developed by the Committee envisions relocating the existing UPRR track one block north to a corridor that includes existing railroad sidings. The city is currently investigating the potential to acquire right-of-way to make the alignment available for freight and passenger rail use. WisDOT would cooperate with the city as their project moves forward.

In Waukesha County, the County Trunk Highway (CTH) C bridge that crosses over the CP Railway line is slated for rehabilitation in 2001. The fieldstone abutments of the bridge will be repaired. CTH J is also slated for expansion from 2 to 4 lanes. The estimated time for construction is 2003, after which time the highway will be re-designated as State Trunk Highway 164. CTH J crosses the rail corridor on a bridge which would be widened for the new road.

Milwaukee, Jefferson and Dane Counties currently report no anticipated local work at railroad crossings within their respective jurisdictions.

In WisDOT Transportation District 2, there are no major highway projects that would impact the project corridor. State Trunk Highway 181 from Glenview Avenue to Menomonee River Parkway will undergo resurfacing. The STH 181 bridge over the CP Railway tracks at the Menomonee River will be resurfaced, but it is not expected to affect rail operations.

The State of Wisconsin recently purchased the Milwaukee Amtrak train station and is sponsoring the Downtown Milwaukee Intermodal Passenger Station Study. This study is evaluating alternative connections to the station via a number of travel modes. Passenger rail service at the station would be consistent with the study objectives.

The Wisconsin Center District Board, the City of Milwaukee, the Metropolitan Milwaukee Association of Commerce, and Milwaukee County are sponsoring a Downtown Connector Study to identify ways to connect transit to all major Milwaukee downtown attractions. The study area includes the Amtrak Station.

WisDOT Transportation District 1 is currently in the process of studying or designing three highway projects that cross the passenger rail corridor:

- The proposed STH 26 bypass of Watertown will most likely occur after 2010. No matter which bypass alternative is selected, there will be a grade separation.
- STH 19 in Sun Prairie is planned for reconstruction in 2002. There will be an improved at-grade crossing.
- STH 73 in Marshall is planned for reconstruction in 2002. There will be an improved at-grade crossing.

The Dane County Regional Airport has recently undertaken an airport expansion study that includes a grade separated entrance over the proposed passenger rail corridor, as well as relocating the existing tracks west of the airport. The track relocation is required to meet clear zone requirements for an airport runway. The track relocation is scheduled for construction in 2002.

WisDOT is working with CP Railway on identifying specific projects between Milwaukee and the Oconomowoc area for making grade crossing improvements using federal Section 1103 funding. WisDOT expects to use this funding, which is available for federally designated high-speed rail corridors, for grade crossing improvements. WisDOT has \$1.0 million currently available and expects to have an additional \$500,000 later this year.

## **S.6 Summary of Impacts**

Table S-1 provides a summary listing of impacts identified in the Environmental Document. For comparison purposes, Table S-1 includes expected impacts of the No-Build alternative. The No-Build alternative includes continued maintenance of the rail corridor to serve existing and future train operations. Improvements to existing tracks, structures, and grade crossings may be required over the long term. The No-Build alternative could create impacts similar to those noted for the Build alternative. The primary difference between the two alternatives is that maintenance under the No-Build alternative would happen over a longer period of time.

**Table S-1**  
**SUMMARY OF IMPACTS**  
**Milwaukee-Madison Passenger Rail Corridor**

Environmental Issue	Units	Build		No Build	
		Measure	Comment	Measure	Comment
<b>Project Length</b>	Miles (Km)	85 (136)	All project miles are on existing railroad right-of-way.	85 (136)	Existing right-of-way maintained.
<b>Cost \$ (Year 2000 Dollars)</b>					
Construction	Million \$	\$176	Excludes purchase of train sets and station development. Costs assume upgrading alignments to serve two Madison stations.	Variable	Similar track improvements may be required over a longer period of time.
Real Estate	Million \$	0	All construction within right-of-way. Does not include station acquisition.	0	Existing right-of-way maintained.
Total	Million \$	\$176		Variable	See comment above.
<b>Community/Residential</b>			Project would use existing railroad right-of-way to avoid and minimize impacts. Concerns about safety, noise and property values have been raised, especially west of Watertown.		Similar concerns may be anticipated if freight use increases west of Watertown. Fewer safety upgrades such as crossing warning devices and right of way fencing would occur.
<b>Economic Development and Business</b>			Project would facilitate State Transportation Plan for improved passenger mobility and providing alternative modes of travel. Benefits accrue from specific station oriented development in communities that have access to passenger rail service.		Would not meet goals of State Transportation Plan. No access to alternative passenger travel, and no secondary economic development in served communities.



Environmental Issue	Units	Build		No Build	
		Measure	Comment	Measure	Comment
<b>Land Conversions</b>					
Total area converted to right-of-way	Acres (Hectares)	0	All project alignment is on existing railroad right-of-way.	0	
Wetland area disturbed by construction (maximum estimate)	Acres (Hectares)	13.5 (5.4)	Would minimize impacts and may improve existing conditions. About 3.9 miles of land bridges near Hubbleton, Deansville, and Sun Prairie would minimize impacts.	0-13.5 (5.4)	Similar track improvements for maintenance may disturb an equal number of wetlands, but over a longer time frame. Land bridges may not be constructed.
Other area converted to right-of-way	Acres (Hectares)	0	Excludes station locations, which would be based on final decisions of local governments.	0	
<b>Grade Crossing Closures</b> Public Private (non-farm) Private (farm)	Number	9 2 20	All closures are proposed and subject to local concurrence and a hearing process by the Office of the Commissioner of Railroads.	0 or variable	Redundant and illegal closures would continue to be pursued over a longer period of time, pending availability of funds.
<b>Real Estate</b>					
Total area from farm operations required	Acres (Hectares)	0	20 farm crossings proposed for closure, access from public roads; 3 closed, access created at new shared crossings. All closures subject to further discussion with owners.	0	See comment on road closures, above.
Agricultural Impact Statement Required?	Yes/No	No	There would be no purchase or indirect affect to farm operations property.	No	
Farmland Rating	Score	0	No farmlands affected, none required.	0	

Environmental Issue	Units	Build		No Build	
		Measure	Comment	Measure	Comment
Total Buildings Required	Number	2/0	2 commercial buildings if City of Madison selects Pennsylvania Avenue station site. No acquisitions at airport station or Monona Terrace.	0	
Housing Units Required	Number	0		0	
Commercial Units Required	Number	2	2 commercial buildings, (includes 1 active business) at Pennsylvania Avenue station Alternative. No acquisition at Airport station or Monona Terrace.	0	
Other Buildings or Structures Required	Number (Type)	0		0	
<b>Environmental Issues</b>					
Flood Plain	Yes/No	Yes	6,174 square feet (556 sq. meters) excavated and 17,050 square feet (1,534 sq. meters) filled.	Yes	Similar impacts anticipated for maintenance, but occurring over a longer period of time.
Stream Crossings	Number	Approx. 49	Alignment crosses through 4 major drainage basins.	Approx. 49	Same impacts for maintaining existing rail corridor.
Endangered Species	Yes/No	Yes	Avoidance expected since construction is within right-of-way. Specific protection in habitat areas and construction timeframes may be required, depending on final design.	Yes	Same impacts expected for maintaining existing rail corridor.